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EXAMINER
BLACKWELL, JAMES H

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/665,794	SHIRAISHI ET AL.
	Examiner	Art Unit
	James H. Blackwell	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _20 July 2009_.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-7 and 14-24_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-7 and 14-24_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _22 September 2003_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☒ All   b) ☐ Some * c) ☐ None of:
        1. ☒ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____.
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to an amendment filed 07/20/2009.

Claims 1-7, and 14-24 are pending.

Claims 1-3, 20 and 24 are independent claims.

Claim 24 is a new claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, limitation 2 of the system recites *"a linking information management server which saves a plurality of linking information made by the linking information making device."*

The Examiner cannot locate any support for a *"linking information management server"* component either in the Specification or Drawings. In fact, the Examiner cannot find the phrases "linking information management" or "information management server" or "information management" at all.

The phrase "management server" is only found in relation to "instruction sheet

management server" (e.g., Specification Page 12, Figure 2 caption; Page 13, last

line) and "document management server" (e.g. Specification Page 14, line 6; Page

20, lines 11-12).

Limitation 3 of the system recites *"a client server which includes a GUI displaying*

a plurality of linking information saved in the linking information management server,

selecting one of a plurality of linking information and inputting at least one parameter

into selected linking information."

The Examiner cannot locate any support for a *"client server"* component either in

the Specification or Drawings. The only mention of "client" is in association with a

"client terminal" (e.g., Specification, Page 13, next to last line; Page 20, line 14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 17-20, and 22-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Robles et al. (hereinafter Robles, U.S. Patent Application Publication

No. 2002/0198904 filed 06/22/2001, published 12/26/2002) in view of Young, M. et al.

(hereinafter Young, "Cantata: Visual Programming Environment for the Khoros System,"

© 1995, Computer Graphics, vol. 29, pp 22-24).

In regard to independent Claim 1, Robles discloses:

Note: For purposes of examination, the phrase *"linking information making*

device" is a device for generating workflows. The workflows combine information

obtained by a *"service list acquisition unit,"* and a *"interface information acquisition*

unit," and are assembled or "linked together" by a *"linking information making unit,"*

where information obtained by both the *"service list acquisition unit"* and *"interface*

information acquisition unit" are presented in a user interface and are subject to user

interaction to create or generate a workflow.

- *A linking information making device* (at least Abstract → Robles describes a

  distributed document production system that allows a user to generate or

  produce a document using any number of available services available on any

  number of available devices), *comprising:*

  o *a service search server comprising:*

    ▪ *a service list acquisition section which acquires a service list*

      expressing respective services each of which execute

      predetermined processings on document data, the respective

      services being provided by a plurality of service processing devices

      (at least Page 3, Paragraphs [0028], [0031-0035] → Robles

      describes a services engine (i.e. *section*) that retrieves information

      on available services directly from production devices using SNMP

(Simple Network Management Protocol). The information includes

the particular services, and options for those services. <u>Robles</u> also

implies that instructions for generating user accessible controls

pertaining to each device as well as the name or other location

identifier of each device capable of providing the services may be

included in this information obtained directly from the device(s).

This interpretation is based on what is optionally contained in a

services database and the notion that the services engine can

either obtain this information from the database or directly from the

device(s)).

- o *a client terminal in communication with the service list acquisition section*

    (see Figures 1 and 2 → <u>Robles</u> teaches a production client in

    communication with a production server which, in turn, is in

    communication with production devices)*, the client terminal comprising:*

    - ▪ *an interface information acquisition section which acquires, for each*

        of the services being provided, (at least Page 3, Paragraph [0028]

        → as noted above, <u>Robles</u> implies that instructions for generating

        user accessible controls (e.g., a GUI, which presumably contains

        interface information since the GUI is controlling the device)

        pertaining to each device, as well as the name or other location

        identifier of each device capable of providing the services, may be

        included in this information obtained directly from the device(s)).

Note: For purposes of examination, the phrase *"predetermined processing(s)"* used in the limitation below, describes predefined services that each device is capable of performing.

- *a respective piece of interface information including a method by which the corresponding predetermined processing is started* (at least Page 4, Paragraph [0039]; Figures 10-13 → <u>Robles</u> teaches that a print command can be issued (e.g. *a method by which the predetermined processing is started*), which acts to start the predetermined processing).

- *a linking information making section which makes linking information to be used for linking the predetermined processings based on the interface information which has been acquired by the interface information acquisition section, and transmits the linking information* (at least Figure 12A → <u>Robles</u> provides a user interface through which various services are listed (item 106) and can be selected and options set for each service by a user. Selected services and options are viewable by the user (item 108). Multiple services can be assembled (see Figures 12D-F) into a list of instructions (the beginnings of a workflow). At this point, the user can choose to "link" these instructions by selecting the Preview button (item 112). Selecting the "ok" button (item 114) takes this

assembled list of instructions to the next step (see Figure 13) where
the system determines what devices can carry out the instructions.

It is presumed that by selecting the "ok" button (item 114) the
user invokes the start of a linking process that will end with the
creation of a workflow. By selecting the "ok" button (item 156)
associated with this user interface, the user presumably adds the
additionally selected content to the existing list and the process of
"linking" the instructions and the devices together into a workflow is
completed. The resulting workflow is then *transmitted* to the
previously selected device(s) to be executed)),

- *the linking information including information to be displayed on
  respective screens of a one or more of the service processing
  devices and to be selected by a user operating one of the screens
  when the user instructs to start linking the predetermined
  processings* (as described above, Robles provides a user interface
  that displays services, options for services, and devices for which
  those services/options can be carried out and that can be selected
  by a user) to generate a workflow that is then submitted to the
  device(s) for processing.

Thus, Robles provides a user interface whereby a user can
cause the linking of services, options for each of the services, and
devices capable of carrying out the services to take place.

    o   *an instruction sheet management server comprising:*

        ■   *a management section which stores the transmitted linking*

            information and further transmits the stored linking information to

            the one or more of the service processing devices for displaying on

            the screen based on a request from the service processing devices

            (at least Figure 14 → Robles depicts a production manager that

            allows the user to obtain the status of devices carrying out their

            assigned processing(s) on selected documents. The user can

            interact with this interface).

                Robles fails to explicitly disclose:

            o   *wherein the client terminal further comprises a display which*

                displays a first window including a first icon corresponding to

                first interface information acquired by the interface

                information acquisition section, a second window including a

                second icon corresponding to a linking pattern, and a third

                window including linked first and second icons dragged and

                dropped from the first and second windows by the user, and

                the linking information making section makes the linking

                information in accordance with the linked first and second

                icons in the third window.

                However, Young teaches a visual programming environment

            (Cantata) whereby a user (at a *client terminal*) designs and

executes programming (e.g. work and data flows) by dragging
and dropping, and connecting icons representing programs (i.e.
a first window content), as well as control structures (i.e. *a
second window* content) to a workspace (i.e., *a third window*)
and connecting the icons with data connections representing
data flow (see pages 22-24 and Figures, especially Figure 1).
Based on Figure 1, Young appears to place both program and
control-related icons in a single window (i.e. above workspace
or third window) as opposed to the invention (see Applicants'
Figure 4) however this is a design choice. Both Young and the
instant invention contain icon-based program and control
components that can be dragged and dropped and connected to
construct a network that can then be executed to carry out
whatever process the user had in mind.

It would have been obvious to one of ordinary skill in the art
at the time of invention to combine the disclosures of Robles
and Young as both inventions describe systems that allow a
user to design and implement procedures based on a visual
programming paradigm. Adding Young to Robles provides
Robles with a visual programming interface by which a user can
design and execute a process such as a printing workflow.

Regarding independent Claims 2 and 3, Claims 2 and 3 merely recite a

method, and program on a recording medium operable (executable) on the device of

Claim 1. Thus, <u>Robles</u> in view of <u>Young</u> discloses every limitation of Claims 2 and 3,

and provides proper motivation, as indicated in the above rejection of Claim 1.

In regard to dependent Claim 4, <u>Robles</u> discloses:

- *A document processing system, comprising:*

    o *the linking information making device according to claim 1 which acquires*

        the service list transmitted from a search device and the pieces of the

        interface information from the service processing devices via the search

        device; and (at least Page 3, Paragraph [0028] → <u>Robles</u> describes a

        services engine (*a search device*) that obtains information from service

        devices directly, and is further capable of periodically updating that

        information), *further comprising:*

        ▪ *a plurality of service processing devices which provide services for*

            executing predetermined processings of document data and

            transmit the pieces of the interface information to the search device

            (at least Page 3, Paragraph [0028]; Figure 8 → in Figure 8, <u>Robles</u>

            depicts a plurality of production devices capable of providing

            services and transmitting services/capabilities to the services

            engine upon request).

    o *the search device provided with:*

- *a service information storage section for storing the pieces of the interface information which have been transmitted from currently-available service processing devices* (at least Page 3, Paragraph [0028] → Robles teaches a services database is available to provide electronic storage to device services/options available on a network or elsewhere).

- *a search section for searching services corresponding to services, for which search has been requested, using the pieces of the interface information which have been stored in the service information storage section* (at least Page 3, Paragraph [0028] → Robles describes a services engine that retrieves (after locating) information on services directly, or alternatively obtains the information from the services database), and

- *a transmission section which transmits the service list based on the search results of the search section* (at least Page 3, Paragraph [0031] → Robles teaches a device selector 60 queries services database 38 or devices 16 directly and identifies a device or devices 16 capable of providing the selected services. In other words, the devices are "searched" for, identified, and their available services, options, interface information is transmitted back to the system such that the interface generator 43, can generate a user

interface with user accessible controls for selecting between the

identified device or devices).

In regard to dependent Claim 5, <u>Robles</u> discloses:

- *the transmission section of the search device transmits the service list ..., to the*

    linking information making device (at least Page 3, Paragraph [0032] → <u>Robles</u>

    teaches a plan generator 68 that is responsible for merging formatted production

    request 44 with selected services 46, as illustrated in Figure 3 under the control

    of a user who starts the process. Device drivers 70 translate the production plan

    44 into a specialized set of commands for each selected production device 16

    handling production plan 44. Linking in the system of <u>Robles</u> is at least begun by

    a user interacting with the system.

In regard to dependent Claim 6, <u>Robles</u> discloses:

- *the service processing devices transmit pieces of input information and pieces of*

    output information on services, service names, and service information location

    as the interface information (at least Pgs. 2-3, Paragraphs [0027-0028], [0031] →

    <u>Robles</u> teaches that service devices via SNMP transmit, at least upon request,

    information on their services as well as interface information, their location, and

    identification).

In regard to dependent Claim 7, <u>Robles</u> discloses:

- *interface information acquisition section of the linking information making device acquires pieces of service information location for accessing the respective service processing devices, from the search device, and acquires pieces of interface information from the service processing devices based on pieces of the acquired service information location* (at least Page 3, Paragraphs [0028], [0031] → <u>Robles</u> teaches that the services engine includes a services locator 58 and device selector 60. The services locator 58 obtains services and interface information from each of the devices either via database or directly).

In regard to dependent Claim 17, <u>Robles</u> discloses:

- *the management section stores a plurality of the linking information as a plurality of workflows* (at least Page 5, Paragraph [0045]; Figure 14 → <u>Robles</u> provides a user interface which lists a plurality of linking information as production plans (i.e. workflows) that a user can interact with. These workflows are queued and hence are stored by the system, at least temporarily).

    Regarding independent Claims 18 and 19, Claims 18 and 19 merely recite a method, and program on a recording medium operable (executable) on the device of Claim 17. Thus, <u>Robles</u> in view of <u>Young</u> discloses every limitation of Claims 18 and 19, and provides proper motivation, as indicated in the above rejection of Claim 17.

In regard to independent Claim 20, <u>Robles</u> discloses:

Note: For purposes of examination, the phrase *"linking information making device"* is a device for generating workflows. The workflows combine information obtained by a *"service list acquisition unit,"* and a *"interface information acquisition unit,"* and are assembled or "linked together" by a *"linking information making unit,"* where information obtained by both the *"service list acquisition unit"* and *"interface information acquisition unit"* are presented in a user interface and are subject to user interaction to create or generate a workflow.

- *A computer-readable recording medium that stores a program for controlling a computer to execute a processing for making linking information* (at least Abstract → <u>Robles</u> describes a distributed document production system that allows a user to generate or produce a document using any number of available services available on any number of available devices), *the program including instructions for controlling the computer to execute:*

- o *acquiring, from service processing devices through a network, pieces of service information expressing different types of processings executed by the service processing devices on document data* (at least Page 3, Paragraphs [0028], [0031-0035] → Robles describes a services engine (i.e. *unit*) that can retrieve information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services and options for those services. Robles also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s). This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s));

- o *displaying the pieces of service information on a display* (at least Page 4, Paragraph [0039]; Figure 10 → as shown in the figure, device services information is displayed to the user for selection);

o   *making linking information that links the processings to be executed by the*

service processing devices as a workflow based on a user operation on

the display (at least Figure 12A → Robles provides a user interface

through which various services are listed (item 106) and can be selected

and options set for each service by a user. Selected services and options

are viewable by the user (item 108). Multiple services can be assembled

(see Figures 12D-F) into a list of instructions. At this point, the user can

choose to "link" these instructions by selecting the Preview button (item

112). Selecting the "ok" button (item 114) takes this assembled list of

instructions to the next step (see Figure 13) where the system determines

what devices can carry out the instructions. It is presumed that by

selecting the "ok" button (item 114) that the user invokes the start of a

linking process that will end with the creation of a workflow. By selecting

the "ok" button (item 156) associated with this user interface, the user

presumably adds the additionally selected content to the existing list and

the process of "linking" the instructions and the devices together into a

workflow is completed. The resulting workflow is then *transmitted* to the

previously selected device(s) to be executed));

      o *storing a plurality of pieces of the linking information as a plurality of*

          workflows in a storage unit (at least Page 3, Paragraph [0035] → Robles

          provides a cache for storing at least a list of preferred devices; Page 4,

          Paragraph [0038] → describes various computer storage mediums onto

          which the system of Robles can be embodied; Page 5, Paragraph [0045]

          → describes queues into which production plans (i.e. *workflows)* may be

          at least temporarily stored and allows a user to re-direct failed productions

          to other devices, which would require that the plan be retained)*;*

      o *transmitting, in response to a requirement from one of the service*

          processing devices, the plurality of pieces of the stored linking information

          through the network to the one of the service processing devices so that a

          list of the plurality of workflows are displayed on a screen of the one of the

          service processing devices for a user selection, and one of the workflows

          is started based on the user selection (at least Page 5, Paragraph [0045];

          Figure 14 → Robles provides a means by which submitted (i.e.

          transmitted) production plans (i.e. *workflows*) can be displayed to a user

          and with which a user can interact to pause (e.g. stop/start), delete or re-

          direct. The first and third options act to start/re-start the selected plan(s)).

Robles fails to explicitly disclose:

o   *wherein the pieces of service information are displayed as icons, the user*

operation on the display included dragging and dropping icons

corresponding to the pieces of service information corresponding to the

processings to be executed to generate linked icons, and the step of

making linking information included making the linking information in

accordance with the linked icons,

However, Young teaches a visual programming environment (Cantata)

whereby a user (at a *client terminal*) designs and executes programming (e.g.

work and data flows) by dragging and dropping, and connecting icons

representing programs (i.e. *a first window* content), as well as control

structures (i.e. *a second window* content) to a workspace (i.e., *a third window*)

and connecting the icons with data connections representing data flow (see

pages 22-24 and Figures, especially Figure 1). Based on Figure 1, Young

appears to place both program and control-related icons in a single window

(i.e. above workspace or third window) as opposed to the invention (see

Applicants' Figure 4), however this is a design choice. Both Young and the

instant invention contain icon-based program and control components that

can be dragged and dropped and connected to construct a network that can

then be executed to carry out whatever process the user had in mind.

It would have been obvious to one of ordinary skill in the art at the time of

invention to combine the disclosures of Robles and Young as both inventions

describe systems that allow a user to design and implement procedures

based on a visual programming paradigm. Adding <u>Young</u> to <u>Robles</u> provides

<u>Robles</u> with a visual programming interface by which a user can design and

execute a process such as a printing workflow.

In regard to dependent Claim 22, <u>Robles</u> discloses:

- *the transmitting comprises transmitting the plurality of pieces of the linking*

  information in response to a request from one or more of the service processing

  devices (at least Page 5, Paragraph [0045]; Figure 14 → <u>Robles</u> provides a

  means by which submitted (i.e. *transmitted*) production plans (i.e. workflows) can

  be displayed to a user and with which a user can interact to pause (e.g.

  stop/start), delete or re-direct. The first and third options act to start/re-start the

  selected plan(s)).

In regard to dependent Claim 23, <u>Robles</u> discloses:

- *the service information includes a service list* (Page 3, Paragraphs [0028], [0031-0035] → <u>Robles</u> teaches a services engine can retrieve information on available services directly from production devices using SNMP (Simple Network Management Protocol). The information includes the particular services and options for those services. <u>Robles</u> also implies that instructions for generating user accessible controls pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s). This interpretation is based on what is optionally contained in a services database and the notion that the services engine can either obtain this information from the database or directly from the device(s)).

- *pieces of interface information corresponding to the respective service processing devices* (Page 3, Paragraph [0028] → as noted above, <u>Robles</u> implies that instructions for generating user accessible controls (e.g., a GUI, which would presumably contain interface information since the GUI is controlling the device) pertaining to each device as well as the name or other location identifier of each device capable of providing the services may be included in this information obtained directly from the device(s)).

In regard to independent Claim 24, <u>Robles</u> discloses:

Note: For purposes of examination, the phrase *"linking information making device"* is a device for generating workflows. The workflows combine information obtained by a *"service list acquisition unit/section,"* and a *"interface information acquisition unit/section,"* and are assembled or "linked together" by a *"linking information making unit/section,"* where information obtained by both the *"service list acquisition unit/section"* and *"interface information acquisition unit/section"* are presented in a user interface and are subject to user interaction to create or generate a workflow.

Item 2 of the system recited below is *"a linking information management server which saves a plurality of linking information made by the linking information making device."* The Examiner cannot locate any support for such a component either in the Specification or Drawings. For purposes of examination, the Examiner will assume that this component acts to store generated workflows.

Item 3 of the system recited below is *"a client server which includes a GUI displaying a plurality of linking information saved in the linking information management server, selecting one of a plurality of linking information and inputting at least one parameter into selected linking information."* The Examiner cannot locate any support for a *"client server"* component either in the Specification or Drawings. For purposes of examination, the Examiner will assume that what is described is simply a client with a GUI.

> *A document processing system, comprising:*

  o *(1) a linking information making device* (at least Abstract → <u>Robles</u>

    describes a distributed document production system that allows a user to

    generate or produce a document using any number of available services

    available on any number of available devices) *which acquires a service list*

    transmitted from a search device and pieces of interface information from

    a plurality of service processing devices via the search device, the linking

    information making device comprising:

    ▪ *a service search server comprising:*

      • *a service list acquisition section which acquires the service*

        list expressing respective services each of which execute

        predetermined processings on document data, the

        respective services being provided by the plurality of service

        processing devices (at least Page 3, Paragraphs [0028],

        [0031-0035] → <u>Robles</u> describes a services engine (i.e.

        section) that retrieves information on available services

        directly from production devices using SNMP (Simple

        Network Management Protocol). The information includes

        the particular services, and options for those services.

        <u>Robles</u> also implies that instructions for generating user

        accessible controls pertaining to each device as well as the

        name or other location identifier of each device capable of

> providing the services may be included in this information

> obtained directly from the device(s). This interpretation is

> based on what is optionally contained in a services database

> and the notion that the services engine can either obtain this

> information from the database or directly from the device(s))*;*

- *a client terminal in communication with the service list acquisition*

  section (see Figures 1 and 2 → <u>Robles</u> teaches a production client

  in communication with a production server which, in turn, is in

  communication with production devices), *the client terminal*

  comprising:

  - *an interface information acquisition section which acquires,*

    for each of the services being provided, a respective piece of

    the interface information including information about a

    method by which the corresponding predetermined

    processing is started (at least Page 3, Paragraph [0028] →

    <u>Robles</u> implies that instructions for generating user

    accessible controls (e.g., a GUI, which presumably contains

    interface information since the GUI is controlling the device)

    pertaining to each device, as well as the name or other

    location identifier of each device capable of providing the

    services, may be included in this information obtained

    directly from the device(s))*, and*

- *a linking information making section which makes linking*

  information to be used for linking the predetermined processings

  based on the interface information which has been acquired by the

  interface information acquisition section, and transmits the linking

  information, the linking information including information to be

  displayed on respective screens of one or more of the service

  processing devices and to be selected by a user operating one of

  the screens when the user instructs to start linking the

  predetermined processings (at least Figure 12A → <u>Robles</u> provides

  a user interface through which various services are listed (item 106)

  and can be selected and options set for each service by a user.

  Selected services and options are viewable by the user (item 108).

  Multiple services can be assembled (see Figures 12D-F) into a list

  of instructions (the beginnings of a workflow). At this point, the user

  can choose to "link" these instructions by selecting the Preview

  button (item 112). Selecting the "ok" button (item 114) takes this

  assembled list of instructions to the next step (see Figure 13) where

  the system determines what devices can carry out the instructions.

  It is presumed that by selecting the "ok" button (item 114) the user

  invokes the start of a linking process that will end with the creation

  of a workflow. By selecting the "ok" button (item 156) associated

  with this user interface, the user presumably adds the additionally

selected content to the existing list and the process of "linking" the

instructions and the devices together into a workflow is completed.

The resulting workflow is then _transmitted_ to the previously selected

device(s) to be executed))); _and_

- _an instruction sheet management server comprising:_

  - _a management section which stores the transmitted linking_

    information and further transmits the stored linking

    information to the one or more of the service processing

    devices for displaying on the screen based on a request

    from the service processing devices (at least Figure 14 →

    Robles depicts a production manager that allows the user to

    obtain the status of devices carrying out their assigned

    processing(s) on selected documents. The user can interact

    with this interface),

  Robles fails to disclose:

  - _wherein the client terminal further comprises a display which_

    displays a first window including a first icon corresponding to

    first interface information acquired by the interface

    information acquisition section, a second window including a

    second icon corresponding to a linking pattern, and a third

    window including linked first and second icons dragged and

    dropped from the first and second windows by the user; the

linking information making section makes the linking information in accordance with the linked first and second icons in the third window.

However, Young teaches a visual programming environment (Cantata) whereby a user (at a *client terminal*) designs and executes programming (e.g. work and data flows) by dragging and dropping, and connecting icons representing programs (i.e. *a first window* content), as well as control structures (i.e. *a second window* content) to a workspace (i.e., *a third window*) and connecting the icons with data connections representing data flow (see pages 22-24 and Figures, especially Figure 1). Based on Figure 1, Young appears to place both program and control-related icons in a single window (i.e. above workspace or third window) as opposed to the invention (see Applicants' Figure 4) however this is a design choice. Both Young and the instant invention contain icon-based program and control components that can be dragged and dropped and connected to construct a network that can then be executed to carry out whatever process the user had in mind.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Robles and Young as both inventions describe systems that allow a

user to design and implement procedures based on a visual

programming paradigm. Adding <u>Young</u> to <u>Robles</u> provides

Robles with a visual programming interface by which a user can

design and execute a process such as a printing workflow.

Based on the **Note** and interpretation above, <u>Robles</u> does not appear to

allow for the storage of generated workflows by at least a user within the

Graphical User Interface. However, one of ordinary skill in the art at the time

of invention would realize that submitted and executed workflows must at

least be temporarily stored; otherwise they would not exist to be executed.

<u>Young</u>, however does allow a user within the user interface to save

workspaces so that they may be used again (see page 22, middle column, 3rd

paragraph) and therefore teaches:

o *(2) a linking information management server which saves a plurality of*

   linking information made by the linking information making device.

It would have been obvious to one of ordinary skill in the art at the time of

invention to combine the disclosures of <u>Robles</u> and <u>Young</u> as both inventions

are related to the construction of code to carry out specific functions. Adding

the disclosure of <u>Young</u> provides the benefit of allowing a user to save and re-

use previously constructed codes.

<u>Robles</u> discloses:

o *(3) a client server which includes a GUI displaying a plurality of linking*

   information saved in the linking information management server, selecting

one of a plurality of linking information and inputting at least one

parameter into selected linking information (at least Figures 6 and 12A →

<u>Robles</u> provides to a client a GUI which allows the user to construct a

workflow by interacting with, and providing input to services (e.g., setting

printer speed to 12 PPM as illustrated). The service options were

previously obtained/stored from the connected devices);

o *(4) a linking processing server which executes the linking information*

inputted the parameter (at least Pages 2-3, Paragraphs [0025] and [0029];

Figure 6 → <u>Robles</u> describes a Production server which administers

production requests which includes a Production engine which directs

selected devices to execute and produce a document); *and*

▪ *(5) a plurality of service processing devices which provide services*

for executing processings of document data in accordance with the

linking information executed by the linking processing server and

transmit the pieces of the interface information to the search device

(at least Page 3, Paragraphs [0028], [0031-0035] → <u>Robles</u>

describes a services engine (i.e. *section*) that retrieves information

on available services directly from production devices using SNMP

(Simple Network Management Protocol). The information includes

the particular services, and options for those services. <u>Robles</u> also

implies that instructions for generating user accessible controls

pertaining to each device as well as the name or other location

identifier of each device capable of providing the services may be

included in this information obtained directly from the device(s).

This interpretation is based on what is optionally contained in a

services database and the notion that the services engine can

either obtain this information from the database or directly from the

device(s). Additionally, the services information provided by the

devices are provided to the user for selection and subsequent

submission for execution on the devices.),

o   *the search device provided with:*

▪   *a service information storage section for storing the pieces of the*

interface information which have been transmitted from currently-

available service processing devices (at least Page 3, Paragraph

[0028] → Robles teaches a services database is available to

provide electronic storage to device services/options available on a

network or elsewhere);

▪   *a search section for searching services corresponding to services,*

for which search has been requested, using the pieces of the

interface information which have been stored in the service

information storage section (at least Page 3, Paragraph [0028] →

Robles describes a services engine that retrieves (after locating)

information on services directly, or alternatively obtains the

information from the services database); *and*

- ▪ *a transmission section which transmits the service list based on the search results of the search section* (at least Page 3, Paragraph [0031] → Robles teaches a device selector 60 queries services database 38 or devices 16 directly and identifies a device or devices 16 capable of providing the selected services. In other words, the devices are "searched" for, identified, and their available services, options, interface information is transmitted back to the system such that the interface generator 43, can generate a user interface with user accessible controls for selecting between the identified device or devices).

Claims 14-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robles in view of Young, and in further view of Roche (U.S. Patent Application Publication No. 2004/0039647 filed 07/18/2001, Published 02/26/2004).

In regard to dependent Claim 14, Robles and Young fail to disclose:

- *the linking information is a file in an XML format.*

However, Roche discloses *the linking information is a file in an XML format* (Figures 14-18 → Figure 14 depicts an XML-based Work Order containing, in addition to other information such as what to print and where, how to print (1402). This is further described in Figure 17 and represents the parameters needed by a device (and presumably obtained by the system from the device) embodied in an XML format).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of <u>Robles</u>, <u>Young</u> and <u>Roche</u> since all three inventions are related to facilitating the <u>printing of content to devices</u>. Adding the disclosure of <u>Roche</u> provides the benefit of using the implicit structure of XML to describe aspects of the overall print job.

Regarding dependent Claims 15, 16 and 21, Claims 15, 16 and 21 merely recite a method, and programs on recording mediums operable (executable) on the device of Claim 14. Thus, <u>Robles</u> in view of <u>Young</u> and <u>Roche</u> discloses every limitation of Claims 15, 16 and 21, and provides proper motivation, as indicated in the above rejection of Claim 14.

Response to Arguments

Applicant's arguments with respect to claims 1-7, 17-20, 22 and 23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James H. Blackwell whose telephone number is

(571)272-4089. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James H. Blackwell/
10/14/2009

/DOUG HUTTON/
Supervisory Patent Examiner, Art Unit 2176